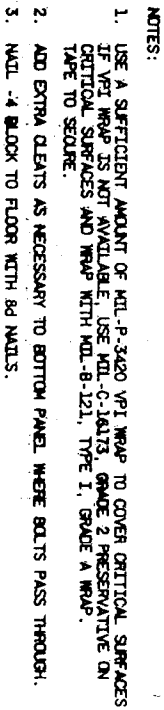


REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF AXLE, FORWARD - MLG, ASSY OF		
2. PART NUMBER 4G12030-101A	3. NATIONAL STOCK NUMBER 1620 00 485 3752	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
<p>a. Identify to meet drawing requirements and MIL-STD-130 with the following notes, in lieu of STP 63-001. Serial number shall be vibropeened, in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the two (2) digit year of manufacture, followed a dash and a sequentially unique three (3) digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 1000 items, the serial number should appear like this: "S/N 98747-02-001"</p> <p>b. Machine to meet drawing requirements per LAC 0701, in lieu of DS 30003.</p> <p>c. Shotpeen to meet drawing requirements per AMS-S-13165, in lieu of STP 51-501.</p> <p>d. Penetrant inspect per ASTM E1417, Type I, Method B or C, Level 3 or 4, in lieu of STP 53-201. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III as specified in NAS-410.</p> <p>e. Magnetic particle inspection per ASTM E1444, in lieu of MIL-I-6868. Use fluorescent type, full wave direct current (FWDC), and wet continuous method. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III, as specified in NAS-410.</p> <p>f. A fillet seal, using MIL-S-81733, Type II, - 1/2 or - 2, or MIL-S-8802, Type I, Class B, - 1/4 or - 1, - 2 or 4. The fillet seal shall be applied after the bushings are installed. In lieu of STP 56-107.</p> <p>g. Prepare clevis surface in the area of rub strip attachment using best aircraft industry standards, in lieu of STK 9000-117, and STK 9000-191. Apply rub strip with MIL-S-8802, in lieu of STM 40-111, using best aircraft industry standards in lieu of STP 60-505.</p> <p>h. Heat treat, normalize, stabilize, and anneal, to meet drawing requirements per SAE AMS-H-6875; in lieu of STP 54-006, and 54-013.</p> <p>i. Nitride ID to meet drawing requirements per SAE AMS-S-6090, in lieu of STP 54-010.</p> <p>g. Any surface ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD- 867, Grinding shall be per MIL-STD-866.</p>		
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<p>5. Drilling, reaming, and honing to meet drawing specifications, using best shop procedures and the following notes in lieu of STP 51-410.</p> <ul style="list-style-type: none"> a. High speed steel (HSS) drills shall be used to drill corrosion resistant steels. b. HSS reamers will be used for rough reaming, and final reaming of steels heat treated below 200 KSI. Carbide or premium grade hi-speed tipped reamers will be used for rough reaming of steels heat treated above 200 KSI. c. Honing stones shall be of 150 to 500 aluminum oxide grit with a medium-hard bond and preferably a multi-head stone. Heads with steel shoes or wipers shall not be used. d. Drilling shall never be used as a final machining operation. A minimum of 0.015 inch on diameter shall be left for final reaming. Holes shall be finished by reaming or boring. When jigs, fixtures, or bushings are not used for drilling holes larger than 1/4 inch, the holes will be piloted with a center drill. Chemical, electrical, or electrochemical hole producing methods shall not be used as a final surface producing method without prior approval from OO-ALC/LILE. e. Rough reaming, the reamer length shall be as short as consistent with required penetration. Final reaming, the diameter cut shall produce a hole that meets the requirements of the engineering drawing. f. Honing shall be used as a final operation where a surface finish better than 125 roughness height ratio is required, and cannot be produced by other means <p>6. Install bushings per the following for sub zero shrinkage requirements, in lieu of STP 56-108.</p> <ul style="list-style-type: none"> a. The bushing installation shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish on the O.D. of the bushing. Forced installation of sub-zero installation, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing. b. Prior to bushing installation, the parts and housing bore shall be cleaned with a solvent to remove all contamination. c. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant. d. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum lost time. Trial runs shall be accomplished as necessary to minimize installation time, which should be in the order of about seven (7) seconds maximum. e. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, the parts shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation, or corrosion shall be permitted. 		
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<p>f. The shrunken part shall be installed into the housing bore which has received a wet coat of TT-P-1757, zinc chromate primer which has been brush applied. The primer shall be applied to the bushing outer surface and the housing bore prior to installation, so as to insure complete sealing of gaps between the housing bore and the installed bushing as evidenced by extruded primer around the entire periphery of both ends of the bushing.</p> <p>7. Change of material alloys and specifications:</p> <p>a. Use material per SAE AMS 6417, in lieu of STM 05-501.</p> <p>b. Use material per ASTM B196, in lieu of QQ-C-530.</p> <p>c. Use material per SAE AMS 5901, in lieu of MIL-S-5059.</p> <p>d. Use material per SAE AMS 5620, in lieu of STM 05-602; this is to be used as an alternate only if the specified material is not available.</p> <p>8. Finish per the following in lieu of DS 30000, and finish codes C, CC, D, Y, 17, 46, 54, and 74-74.</p> <p>a. Cadmium plate per MIL-STD-870, Class 3, Type II. (code C)</p> <p>b. Cadmium-titanium plate per MIL-STD-1500, or SAE AMS 2419, to meet drawing requirements Class 2, Type II. (code CC)</p> <p>c. Chromium plate per MIL-STD-1501, Type II, Class 1. (code D)</p> <p>d. Nickel plate per QQ-N-290, Class 2, Grade A. (code Y)</p> <p>e. Primer wash is not required for the manufacture of this item. (code 17)</p> <p>f. Polyurethane coating per SAE AMS-C-27725. (code 46)</p> <p>g. One coat of epoxy primer per MIL-PRF-85582, Type I, Class C 2. (code 54). Alternate, One coat of epoxy primer per MIL-PRF-23377, Type I.</p> <p>h. Two coats of top coat per MIL-PRF-85285, Type I. (color white, No. 17925 per FED-STD-595). (code 74-74)</p>		
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<p>9. The required forgings will be procured from the qualified forging source using the original certified forging procedures and dies.</p> <p>a. Prior to contract award, the detail part bidder will provide certification, from the forging source to the government, that the certified dies and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for his use in the event that he is the successful bidder.</p> <p>b. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing, and SAE AMS-F-7190. The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the government.</p> <p>10. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>a. Forging drawing: 4G14047-991A Lockheed GA. CAGE 98897 Die number: Die No. Park Drop Forge 4797</p> <p>b. Control of forging process: Unknown.</p> <p>c. Location of forging dies: Park Drop Forge Ladish Co. 777 E. 79th St. 5481 S. Packard Rd. Cleveland, OH 44103 Cudahy, WI 53110</p> <p>11. INSTRUCTIONS FOR QUALIFICATION OF NEW FORGING SOURCE:</p> <p>a. Prior to contract award the contractor will advise the government in writing of their intent to procure new forging dies and the proposed forging source. The contractor shall not proceed to obtain new dies without the express consent of the government procuring agency. The government will have unlimited use of the dies developed under this contract.</p> <p>12. Material Review Board disposition:</p> <p>a. OO-ALC/LILE system engineering retains all rights to review and accept MRB dispositions prior to shipment of discrepant item. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>b. Prior to contract award, the contractor will certify to the government in writing full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. The contractor is responsible to completely search all required documents and fully understand the necessary requirements to manufacture the stated item. Any questions can be forwarded to this office OO-ALC/LILE</p> <p>13. The following specifications are not required for the manufacture of this item.</p> <p>a. fatigue test X995, and static test X999.</p> <p>b. DS 5025.</p> <p>c. Disregard flag note 39 on drawing 4G12030.</p>		
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